



# **Diesel PM Control Measure Public Fleet Rule Workshop**

**May 17 & 18, 2004  
Sacramento and El Monte**

**California Environmental Protection Agency**



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## **Air Resources Board**

# Outline of Today's Presentation

- Background
- What's New?
- Proposed On-road Public Fleet Rule
- Fleet Survey Update
- Comments and Questions

**BACKGROUND**

# Health Impacts of Diesels in California

## ■ Annual health impacts

- ◆ 2,900 premature deaths
- ◆ 3,600 hospital admissions
- ◆ 240,000 asthma attacks/respiratory symptoms
- ◆ 600,000 lost days of work

## ■ By comparison

- ◆ 3,700 deaths from car accidents
- ◆ 2,000 homicides

# Diesel PM is a Toxic Air Contaminant

- Identification
  - August 1998
- Diesel Risk Reduction Plan
  - September 2000
- Airborne Toxic Control Measures
  - Ongoing

# Proposed Rulemaking Schedule - Mobile Sources

## ■ Board Adoption Dates:

- ✓ ◆ Solid Waste Collection Vehicles: Sept. 2003
- ◆ Transit Agencies, Transit Fleet Vehicles: 2004
- ◆ Public On- and Off-road Vehicles: 2004
- ◆ Private On-road Vehicles: 2005
- ◆ Private Off-road Equipment: 2006

**WHAT'S NEW?**

# What's New?

- Proposed Inclusion of Private Utilities
- Early Compliance Incentives
- Compliance Extension for Municipalities/Utilities Located in “Low Population Counties”
- Low-Usage Vehicle



**PROPOSED RULE:**  
**PUBLIC ON-ROAD**  
**FLEETS**

# New Proposed Definitions

- “Utility” is a privately owned company that provides the similar/same services for water, natural gas, and electricity as a utility owned by a municipality
- “Low Usage Vehicle” is a vehicle which accumulates fewer than 1,000 miles per year (or equivalent hours)
- “Low Population County” is a county with fewer than 75,000 people as of July 2005 (projected)

# Proposed Applicability

- Municipal or Utility Active Fleet
  - ◆ Vehicles owned and operated by municipality or utility
  - ◆ Includes leased vehicles operated by the municipality or utility
- Diesel Fueled over 14,000 GVWR
- Model Years 1960 to 2006

# Proposed Best Available Control Technology (BACT)

- Engine Certified to 0.01 g/bhp-hr PM or 0.1 g/bhp-hr plus Retrofit with Highest Level Verified DECS
- Alternative-fuel, or Heavy-Duty Pilot Ignition Engine Certified to Lowest Optional PM Standard
- Retrofit with Highest Level Verified DECS
- Once in Compliance the Vehicle Must Remain In Compliance

# Diesel Emission Control Strategy Verification Levels

## ■ Level 1

- ◆ 25% or greater PM Reduction

## ■ Level 2

- ◆ 50% or greater

## ■ Level 3

- ◆ 85% or greater or  $\leq 0.01$  g/bhp-hr

## ■ Optional NOx Reduction, 15% min.

# Verification Information

Current verification status can be viewed on the web at:

[www.arb.ca.gov/diesel/verdev/  
verdev.htm](http://www.arb.ca.gov/diesel/verdev/verdev.htm)

# Proposed Implementation Schedule

Group	Model Years	BACT %	Deadline as of July 1st
1	1960 – 1987	20	2007
		40	2008
		60	2009
		100	2010
2	1988 - 2002	20	2006
		40	2007
		60	2008
		100	2009
3	2003 –2006 (includes dual/bi-fuel engines)	50	2009
		100	2010

# Proposed Compliance Extensions

- Based on Early Implementation
- Municipality or Utility Located in a Low-Population County
- No Verified DECS
- Dual-Fuel or Bi-Fuel Engine
- Engine Near Retirement



# Early Compliance Extension

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Group	BACT %	Early Compliance Date	Delay Until
1	50	Jan 2007	July 2011
2	50	Jan 2006	July 2010

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# Compliance Extensions (cont)

- Municipalities or utilities located in counties with less than 75,000, as of July 2005 based on projection
- Granted an automatic implementation delay until the 100% compliance deadline
- Counties are listed in regulation

# Proposed Special Circumstances

## ■ DECS Failure

- ◆ DECS Failure/Damage During Warranty
- ◆ DECS Failure/Damage Outside Warranty
- ◆ Repairable Malfunction

## ■ Discontinuation of Fuel DECS

## ■ Level 1 DECS Has Limited Life

## ■ Engine Retirement within One Year

## ■ Participation in Experiment/Demonstration

# Proposed Recordkeeping And Reporting

## ■ Records Kept Accessible at Vehicle Location

- ◆ A list identifying vehicle type, engine manufacturer, engine model
- ◆ The DECS installed for each vehicle
- ◆ Maintenance records on DECS
- ◆ Fuel purchase documentation (Fuel DECS)
- ◆ Exemption documentation

# Proposed Recordkeeping And Reporting (cont.)

## ■ Records Kept in the Vehicle

- ◆ Labeling requirement
- ◆ Installation date of a DECS
- ◆ Engine model year and planned compliance date
- ◆ Mileage records (low usage vehicles)
- ◆ County of operation (low population)
- ◆ Exemption information (i.e., retirement date, experimental permit info, etc.)

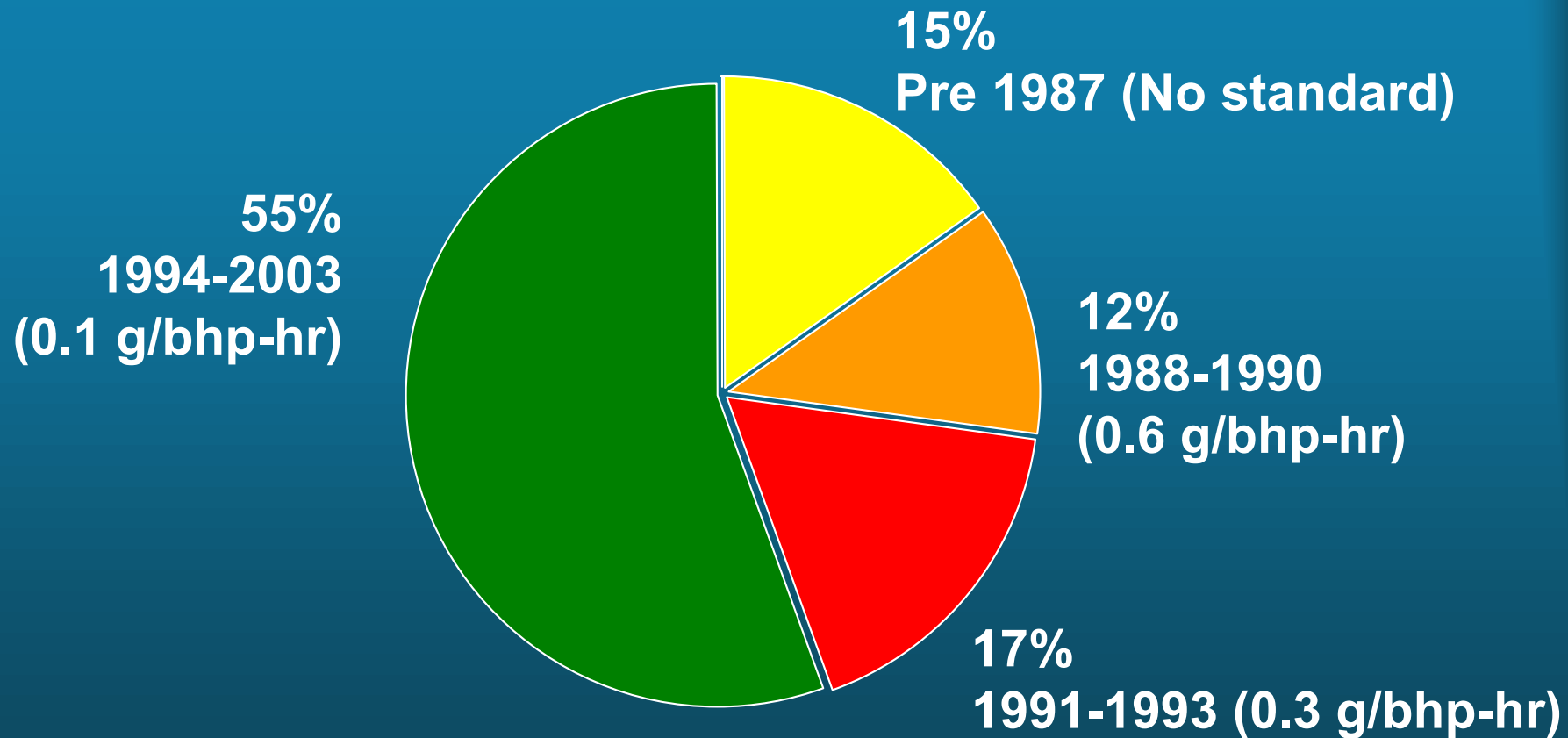
# **PUBLIC FLEETS**

# **SURVEY RESULTS**

# Vehicle Types

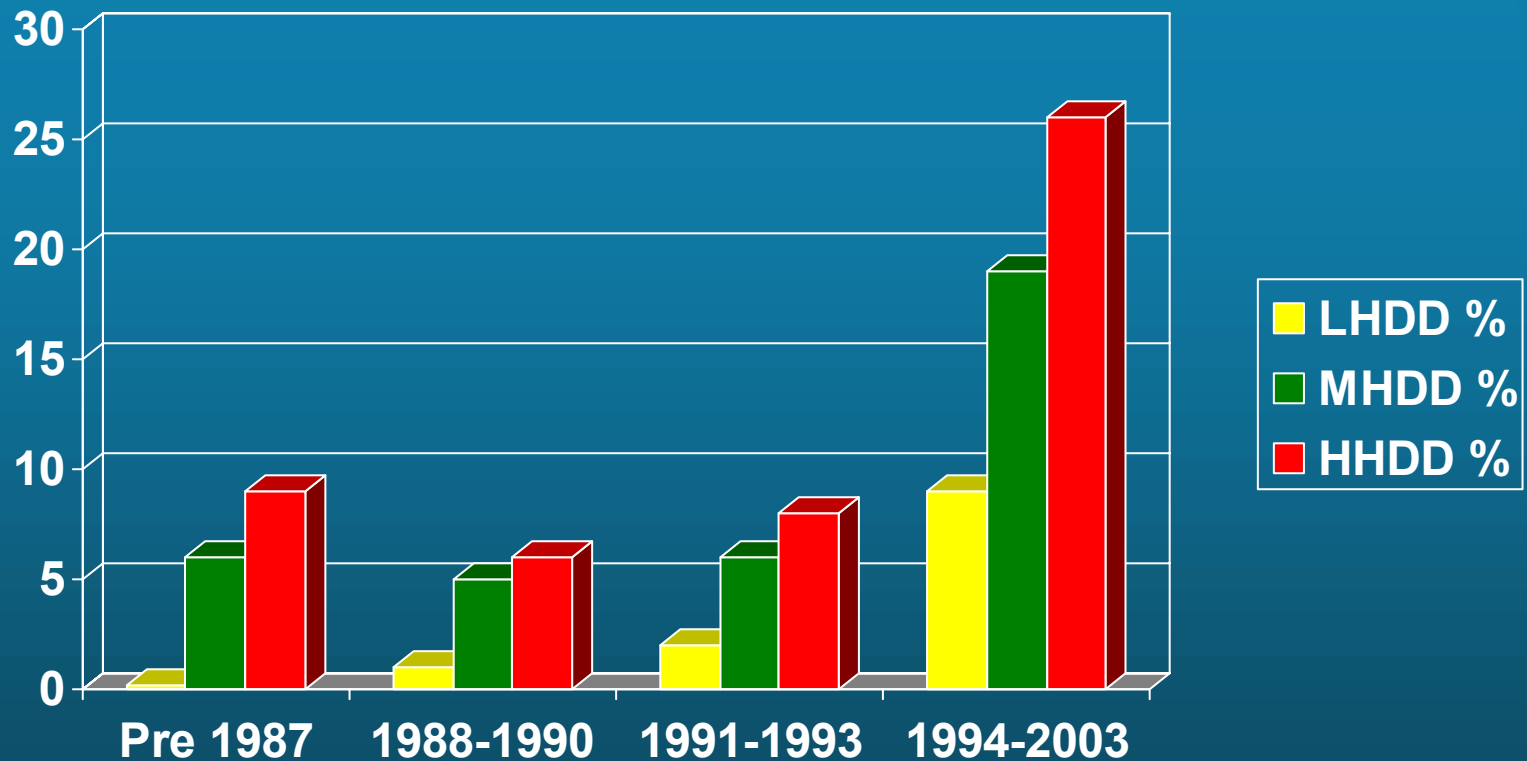


# Public Fleet: PM Standard & Model Year

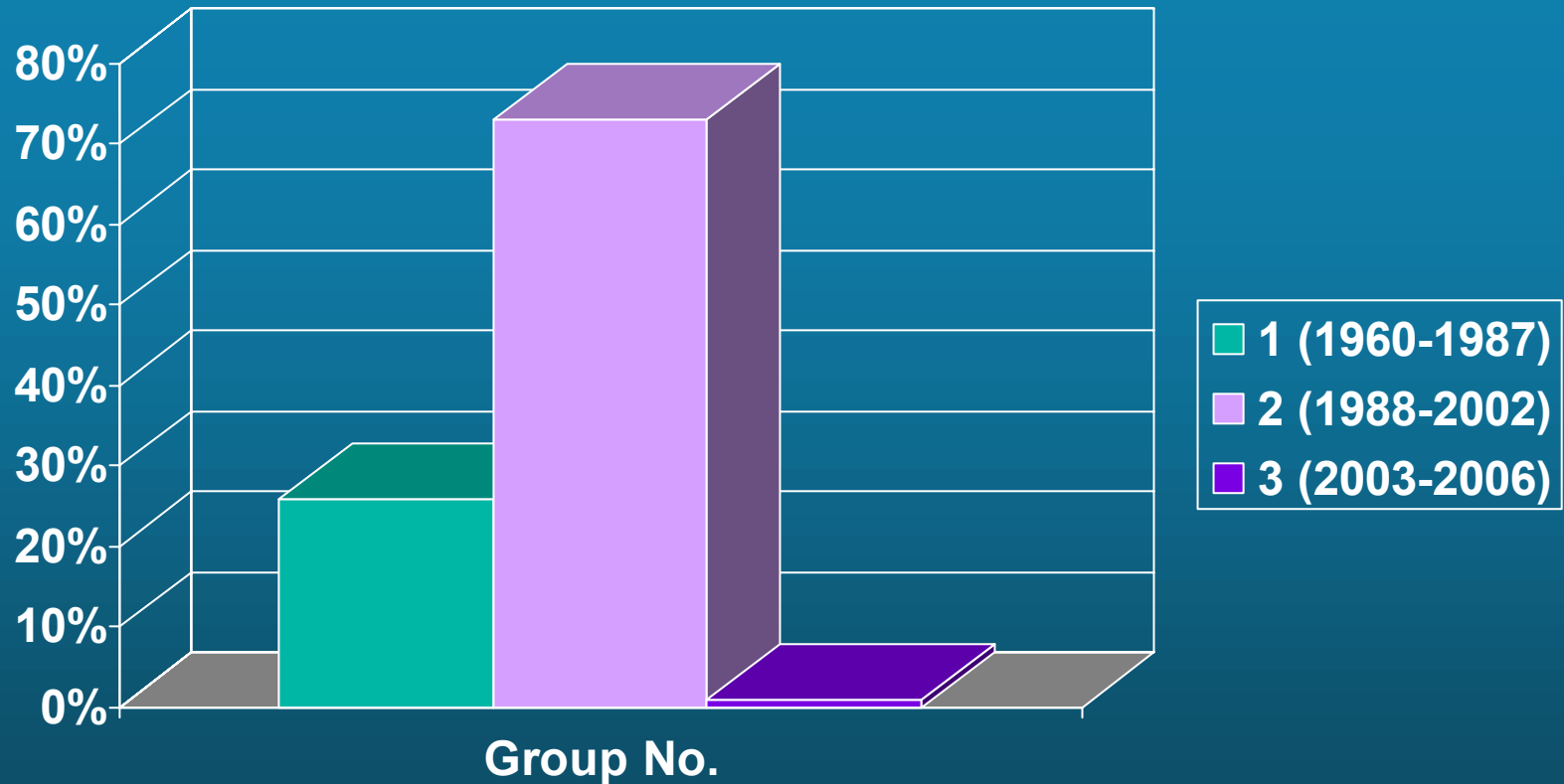




# Public Fleet: Vehicle Class & Model Year



# Vehicles By Group No.



# Emissions Inventory

- Understand Fleet Characteristics
  - ◆ Number of engines, model years, turnover
  - ◆ Public Agency and Private Utilities
- Develop Inventory Scenarios
- Apply to Implementation Schedule
- Maximize Cost-Effective PM and NO<sub>x</sub> Reductions

# NEXT STEPS

- Comments Requested by  
June 16, 2004
- Board Hearing Tentatively Set for  
September 24, 2004
- Staff Report Published 45 Days Prior, or  
August 7, 2004

# COMMENTS REQUESTED

- By Email: [sclemieu@arb.ca.gov](mailto:sclemieu@arb.ca.gov)

cc: [nsteele@arb.ca.gov](mailto:nsteele@arb.ca.gov)

- By Mail:

Air Resources Board

Attention: Sharon Lemieux

cc: Dr. Nancy Steele

9528 Telstar Avenue, Annex II

P.O. Box 8001, El Monte, CA 91731

- By Fax: (626) 450-4480

# Questions

- Visit the website  
[www.arb.ca.gov/msprog/publicfleets/publicfleets.htm](http://www.arb.ca.gov/msprog/publicfleets/publicfleets.htm)
- Sharon Lemieux, P.E.
  - ◆ Lead Staff
  - ◆ Phone: (626) 575-7067
  - ◆ Email: [sclemieu@arb.ca.gov](mailto:sclemieu@arb.ca.gov)
- Dr. Nancy Steele, Manager
  - ◆ Retrofit Implementation Section
  - ◆ Phone: (626) 350-6598
  - ◆ Email: [nsteele@arb.ca.gov](mailto:nsteele@arb.ca.gov)